

PSYCHOTROPIC MEDICATIONS IN SCHOOLS

School nurses and other personnel administering medication may need to administer prescribed psychotropic drugs to students in schools. The majority of disorders for which a student may be treated with psychotropic or psychoactive medications are disorders for which behavioral or psychotherapy is an integral part of the treatment.

The most common disorders for which nurses might encounter a prescribed psychotropic medication are: depression, attention deficit-hyperactivity disorder (ADHD), anxiety, bipolar disorder (manic-depression), and phobias. It is vital that school nurses and other personnel be familiar with these disorders and their treatment because, like other medical conditions, treatment of psychiatric and psychological disorders “is essential...so that (students) can be free to develop necessary academic and social skills”.

The following is a brief review of the psychotropic medications that schools and nurses will most likely encounter. The use of these drugs is increasing in children and adolescents. It should be noted, however, that pediatric use of many of these medications is not yet specifically approved by the Food and Drug Administration (FDA). Such approval requires demonstrated safety and efficacy, and studies of long-term use of these medications by children do not yet exist. This means that important clinical information, such as the kinds of side effects most likely to occur, is being extrapolated from studies of adult use. Children and adolescents may experience a medication differently from adults. Nurses and school personnel who administer and monitor these medications should have regular contact with the child’s psychiatrist or prescribing provider in order to be more fully aware of what they should expect (in terms of effect, behavior, etc.). This is especially important since many of these drugs are not “approved” to be used either in children or for the disorder for which they are being prescribed (e.g., antihistamines for ADHD, antidepressants for anxiety, or antipsychotics for aggressive behavior).

Antidepressants (Depression)

The newest class of anti-depressants are called selective serotonin reuptake inhibitors, usually referred to as SSRIs. Commonly prescribed brand names include Prozac (fluoxetine), Paxil (paroxetine), and Zoloft (sertraline). These medications act in the brain on a chemical messenger called serotonin. A decreased amount of this neurotransmitter in the bloodstream is believed to be one cause of depression; these medications regulate its “reuptake” by the brain, allowing for greater amounts in the bloodstream. These medications may not have a noticeable effect on mood for the first six weeks after beginning administration. However, changes in brain chemistry begin after the first dose. Users of SSRI’s sometimes report feeling slightly nauseated or jittery with initial use; these symptoms usually resolve in a few weeks to a few months. Chronic side effects, however, are often an indication that a different drug is in order. A medication change will usually be to a different SSRI, since both the efficacy and the side effects can vary widely among users. Older antidepressants fall into one of two classes-tricyclics (TCAs) (i.e., Elavil) and monoamine oxidase inhibitors (MAOIs) (i.e. Phenelzine). These drugs also act to regulate the availability of neurotransmitters thought to affect mood-the monoamines, serotonin and norepinephrine. While SSRIs work primarily on regulating only serotonin, TCAs and MAOIs act on both serotonin and norepinephrine simultaneously. This dual action can mean a better antidepressant effect for the patient. However, the majority of these medications have dietary restrictions or side effects that make them difficult to tolerate. Users of MAOIs must avoid foods containing tryptophan (turkey, chocolate, warm milk) and tyramine (yeast, cheese, ripe fruit). Side effects can include GI symptoms, palpitations, and drowsiness. TCA side effects include extrapyramidal symptoms risk and a dry mouth.

Antianxiety Medications (Anxiety, Phobias)

Many health care providers prescribe antidepressant medications for anxiety disorders. However, these are specific medications available for anxiety. Anxiolytics, including benzodiazepines (valium, or Zanax), are high-potency, and relieve symptoms quickly and have few side effects other than drowsiness. The biggest risk from this class of drug is developing tolerance, which can lead to dependence or a need for progressively higher dosages. Because of this, they tend to be used for short periods of time. In the case of panic disorder they can be prescribed for six to twelve months. Withdrawal symptoms can occur after any length of usage. Other anxiolytics include azipirone (Buspar), which do not have the tolerance problems of the benzodiazepines, but can take several weeks to take effect. Side effects include dizziness, headaches, and nausea.

Beta-blockers (such as propranolol) have also been used to treat anxiety, particularly social phobia. They may be used only if they are needed in particularly feared situations (such as public speaking) in order to prevent

symptoms of nervousness (palpitations, shaking hands, etc).

Mood Stabilizers (Bipolar Disorder)

Lithium carbonate is naturally occurring salt that has been used successfully for decades to calm mania and prevent mood cycling. It is most commonly prescribed for a student with bipolar disorder. Most adults with bipolar disorder do very well, but this medication is not as useful with children. The most common side effect is a dry mouth and increased thirst, due to its salt properties.

Anticonvulsants

Depakote (devalproex sodium, valproic acid) is prescribed for children whose disorder includes rapid mood cycling. Tegretol (carbamazepine) has anti-aggressive properties and is therefore useful in treating frequent rage attacks. Side effects to these drugs can include drowsiness/sedation, weight gain, and GI symptoms. New anticonvulsants being used with children include: Neurontin (gabapentin), Lamictal (lamotrigine), Topamax (topiramate), and Gabitril (tiagabine). Of these, Gabitril is the only one the FDA approval specifically for adolescents and is also being used frequently in children.

Stimulants (ADHD)

Cerebral stimulants, used for children with attention deficit hyperactivity disorder (ADHD), are usually considered quite safe. These drugs include Ritalin (methylphenidate), Cylert (pemoline), and Dexdrine (dextroamphetamine). These medications seldom make children “high” or jittery, nor are the sedatives. Instead, stimulants help children control their hyperactivity, inattention, and other behaviors. Side effects include nervousness, insomnia, palpitations, and anorexia.

Different providers use the medications in slightly different ways. Cylert is a long acting medication with a duration of 5 – 10 hours. Ritalin and Dexedrine are short-term medications with a duration of 3 – 4 hours, although longer-term preparations are available that can last through the school day. The short-term dose is often more practical for children who need medication only during the school day or for special situations, like attending church or a prom or studying for an important exam. The sustained-release dosage frees the child from the inconvenience or embarrassment of going to the office or school nurse every day for a pill. The health care provider can help decide which preparation to use and whether a child needs to take the medicine during school hours only or also on evening and weekends.

Nine out of ten children improve on one of the three stimulant drugs. So if one does not produce the desired effect, then others should be tried. Usually a medication is used on a trial basis for at least a week before the decision to continue or change to another drug is made. Sometimes, changing the dosage of the medication is enough to produce the desired effects.

Other types of medication may be used to treat ADHD if the stimulants are ineffective or the side effects are too uncomfortable for the child or parent. Children with ADHD may exhibit a comorbidity disorder, often depression or anxiety. Some medications may treat both disorders or it may be necessary to give a medication specific to each disorder. Antidepressants and other medications may be used to help control accompanying depression and anxiety. In some cases, antihistamines may be tried. Clonidine, a medication frequently used to treat hypertension in adults, may be effective in children with both ADHD and Tourette’s Syndrome. Although stimulants tend to be more effective, Clonidine may be tried when stimulants are ineffective or cause too many side effects. Clonidine can be administered either by pill or by skin patch; possible side effects include drowsiness/sedation, dry mouth, and/or constipation.

As with any medication used in schools, psychotropic drugs should be administered only with written parental request and only from the original and properly labeled container. Changes made to the student’s treatment should be discussed with the school nurse.

Antipsychotic Medication

Antipsychotic medications can be helpful in controlling psychotic symptoms (delusions, hallucinations) or disorganized thinking. These medications may also help muscle twitches (“tics”) or verbal outbursts as seen in Tourette’s Syndrome. They are occasionally used to treat severe anxiety and may help reduce very aggressive

behavior. Examples of traditional antipsychotic medications include: Chlorpromazine (Thorazine), Thioridazine (Mellaril), Fluphenazine (Prolixin), Trifluoperazine (Stelazine), Thiothixene (Navane) and Haloperidol (Haldol). Newer antipsychotic medications include: Clozapien (Clozaril), Risperidone (Risperdal), Quetiapine (Seroquel), Olanzapine (Zyprexa), and Ziprasidone (Zeldox)⁽⁴⁾